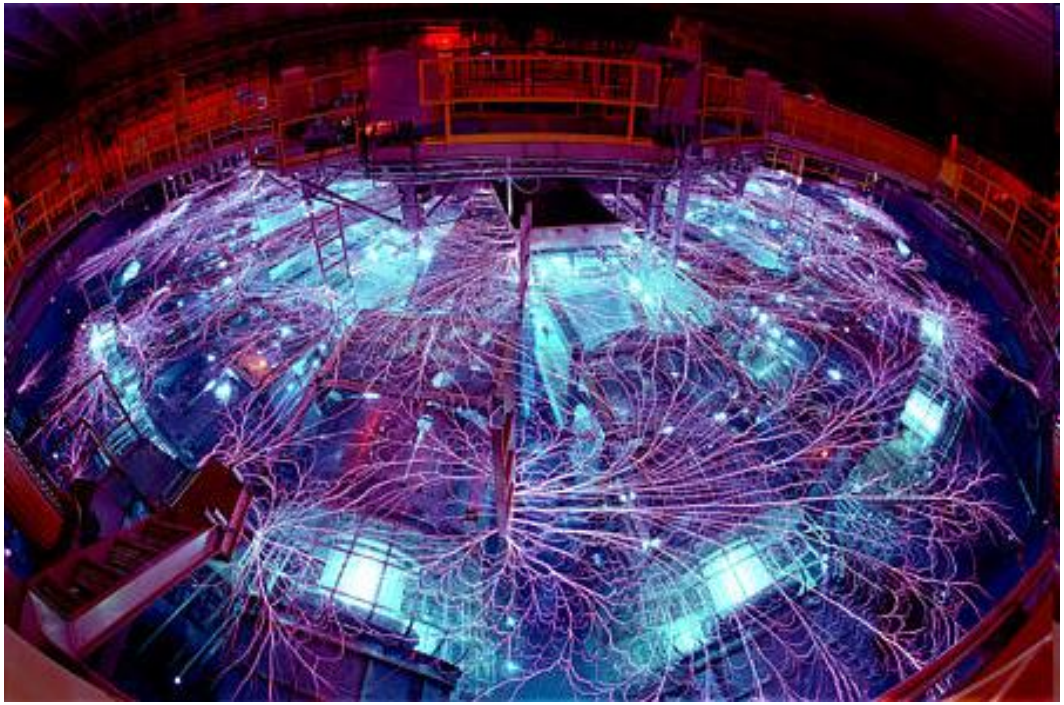
2009 Stimson Task Force Report: *Leveraging Science for Security*



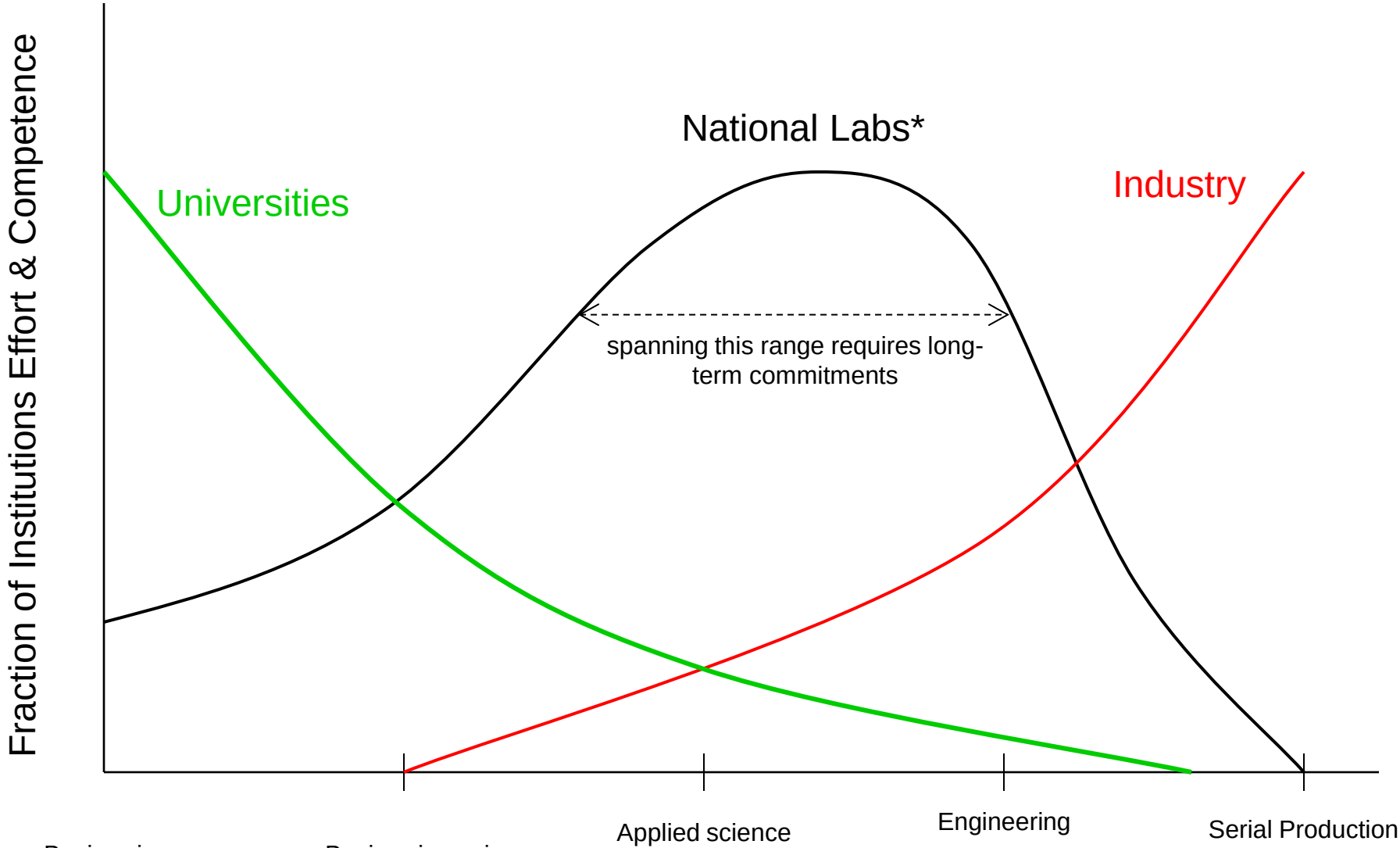
Congressional Commission on the DOE Laboratories
15 September 2014
Elizabeth Turpen, PhD

Briefing Outline

- Study Overview and Context
- Findings (considerations) at 3 Levels
- Recommendations: reorganize government OR…
- Thoughts on Implementation

Study Overview and Context

- Genesis: commissioned by NNSA; funded also by private foundations
- Scope: weapons labs and Nevada Nuclear Security Site
- Objective: formulation of a 21st Century national security S&T enterprise (that supports the “core” and other missions of the 3 labs)
- Broader Aperture: role of federal laboratories in spurring innovation (broader definition of “national security”)



* This profile is one part of the definition of "National Lab." Problems that need this profile are the only problems National Labs (should) work on. Because this profile is so heavily weighted toward basic science, which takes a long time to bring to engineering application, it requires long-term commitments to building the science.

Level I Considerations: Tools Available to NNSA/Labs

- Strategic Memorandums of Understanding (MOUs)
  - Long-term investment possibilities in capabilities of mutual interest
  - Limitations
    - Feasibility of attaining the necessary number and variety
    - Limited to “bilateral” investment in a mutual objective
    - Long-term investments require a level playing field among parties
- Work-for-Others (WFO)
  - Piecemeal, tactical, bottom-up approach
  - Short-turnaround, small-budget activities cannot sustain the Labs
  - Allowing Labs autonomy while ensuring service to a government-wide S&T strategy
- Industry Partnerships
  - Labs are challenged in “teaming” with industry
  - Other than CRADAs, industry comes to the Labs for specific solutions, not sustained collaboration
  - Industry partnerships cannot grow to offset declines in Defense Programs funding

Level II Considerations

- Loss of a clear, urgent mission
- Risk averse DoE/NNSA culture
- Synergistic WFO opportunities require approval across numerous stovepipes
- Relationship between DoE/NNSA and the Labs is fractured
  - Sense of partnership is significantly eroded
  - Labs need a greater sense of being part of strategy formulation
  - Labs sense they are treated as just another contractor
  - Labs often circumvent DoE HQ by turning to Congress

Level III: 2014 Update
The Environment beyond DoE

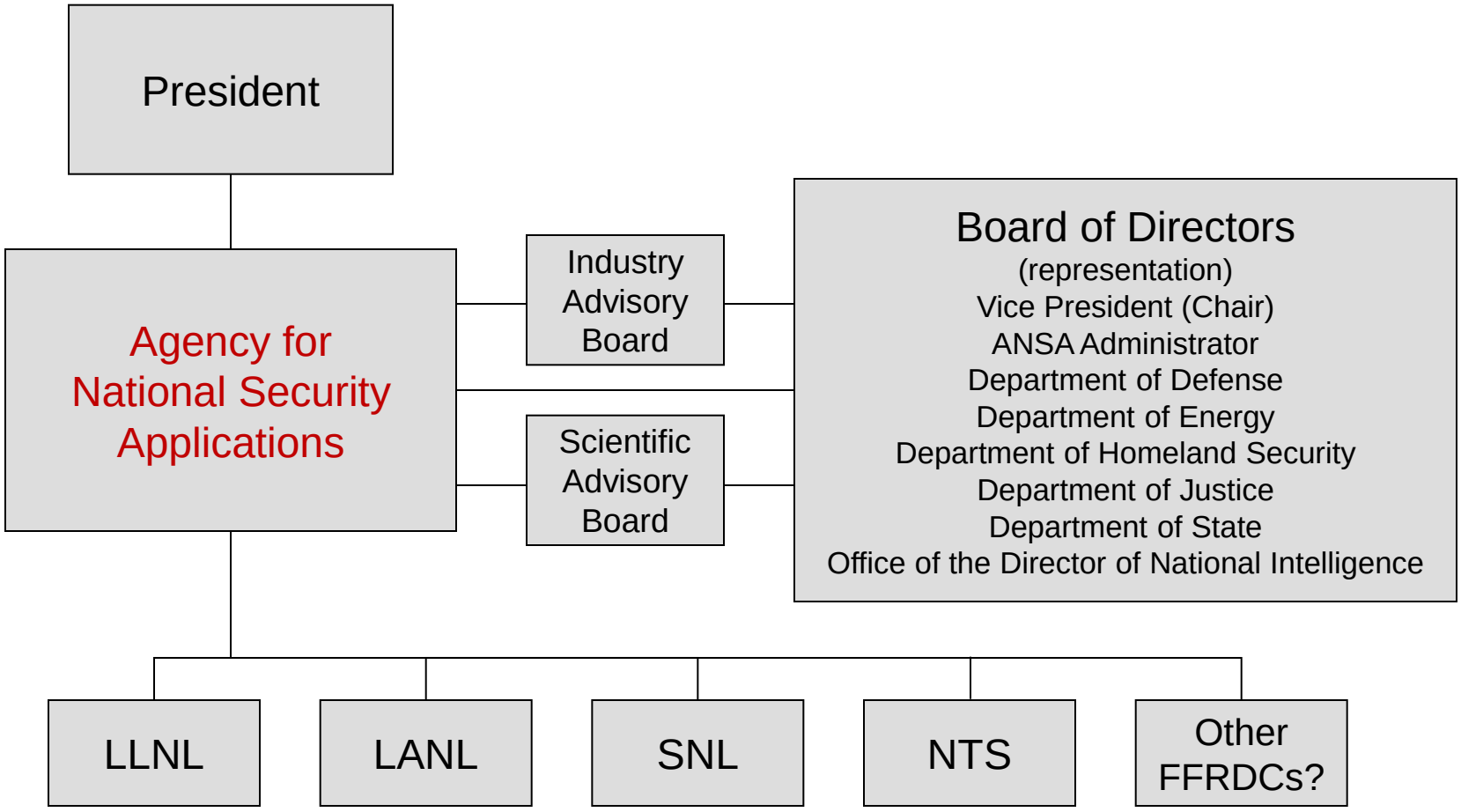
- Consistent: Insufficient consensus on role of nuclear weapons
- Amplified: DOD and Congress unhappy with NNSA's performance
- Consistent: Hard slog of political support for long-term R&D
- Amplified: Budget reality

Potential for cascading unintended consequences to the detriment of US national security

Solution: Agency for National Security Applications

- Independent agency (hybrid between NASA and 2006 DSB's 'government corporation')
- Mechanisms and oversight to achieve a transformation to a 21st Century National Security Enterprise
  - Enterprise would fully leverage taxpayer investments in the Labs' S&T infrastructure for government-wide national security

2009 Stimson Task Force Governance Proposal



However, Without Reinventing Government…

- On WFO
  - Establish standard criteria for evaluating WFO opportunities; based on principle of adjacency
  - Establish single Basic Ordering Agreement between non-DOE agencies and the labs
- Industry
  - Create interface to facilitate tech transfer and inject additional business know-how into the labs (industry review or advisory panel)
- NNSA-Lab
  - NNSA and labs should conduct strategic prioritization of S&T programs (focus on “national security grand challenges” and capability enhancement)
  - NNSA and labs establish and publish criteria for determining challenges and programs appropriate for each laboratory based on core capabilities and required retention/enhancement of specific expertise

Thoughts on Implementation

- **Context (Level III)**
  - Wildcard (Wen Ho Lee, Cox Commission, PFIAB…)
  - NNSA *Implementation* failure

- **Stakeholder Buy-In (multidimensional – possibly all levels)**
  - Agency leadership?
  - Congress (authorization vice appropriations; easier than the floor vote); path of least resistance OR what is the consequence of inaction?
  - Others (labs, local communities, NGOs, etc?)

Regardless of Level, Implementation requires:

- **Accountability**
  - Who is responsible? How to hold them accountable? Who will be the "champions" for the effort?
- **Clear and Concise Recommendations**
  - Avoiding claims of "implementation" devoid of real change
- **Metrics**
  - Metrics by which progress will be measured
  - External, independent and routine process for assessment of progress?